Severn Trent Water Limited
Final Drought Plan 2014

Strategic Environmental Assessment:
Post Adoption Statement

February 2014

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1 INTRODUCTION

1.1 BACKGROUND TO THE DROUGHT PLAN

Water companies in England and Wales are required to prepare and maintain Statutory Drought Plans (DPs) under Sections 39B and 39C of the Water Industry Act 1991, as amended by the Water Act 2003, which set out the actions a company will take before, during and after a drought. The Water Industry Act 1991 defines a DP as '*a plan for how the water undertaker will continue, during a period of drought, to discharge its duties to supply adequate quantities of wholesome water, with as little recourse as reasonably possible to drought orders or drought permits*'.

The DP Direction 2011 states that revised DPs should be submitted according to the following schedule:

6(b) for a revised drought plan –

i. if section 39B(6)(a) of the Act applies as a result of a material change of circumstances arising from a new statutory provision, within 12 months after the date on which the change occurs;

ii. if section 39B(6)(a) of the Act applies as a result of a material change of circumstances arising for any other reason, within 6 months after the date on which the change occurs;

iii. if section 39B(6)(c) of the Act applies, within 3 years and 6 months after the date on which its drought plan, or its last revised drought plan, is published.

On 1 October 2010, Section 76 of the Water Industry Act 1991 was amended by the commencement of Section 36 of the Flood and Water Management Act 2010. Severn Trent Water Limited (Severn Trent Water) previously published a Final Drought Plan in 2009. As required by the Water Industry Act 1991, this plan was reviewed and updated in early 2013, taking account of various changes including the introduction of The Water Use (Temporary Bans) Order 2010 and updated drought planning guidance from the Environment Agency. Severn Trent Water published its Draft Drought Plan for consultation in May 2013 and this was accompanied by a Strategic Environmental Assessment (SEA) Environmental Report and a Habitats Regulation Assessment (HRA) Report. The public consultation period ran from 10 May 2013 to 5 July 2013.

In light of stakeholder comments and feedback, Severn Trent Water made further changes to its Drought Plan and published a Statement of Response and a revised Draft Drought Plan in August 2013 to show how the plan had been changed in response to the representations received. The Secretary of State has now approved

the plan and the Final Drought Plan has now been published on Severn Trent Water's website, accompanied by this SEA Post Adoption Statement.

1.2 THE SEA PROCESS

The DP has been subject to SEA in compliance with the SEA Directive[1], as transposed in England by the SEA Regulations[2]. This SEA Post Adoption Statement is produced in accordance with the provisions of Regulation 16.

The SEA of Severn Trent Water's DP started in October 2012. An SEA Scoping Report was issued to the statutory consultees in November 2012 and an Environmental Report was produced with the draft DP in May 2013. HRA screening of the DP was also undertaken and an HRA report prepared to help inform the SEA process.

1.3 PURPOSE OF THE SEA POST ADOPTION STATEMENT

In accordance with the SEA Regulations, this SEA Post Adoption Statement describes:

- How environmental considerations have been integrated into the final DP (Section 2)
- How the Environmental Report influenced the Drought Plan (Section 3)
- How responses to consultation have been taken into account (Section 4)
- The measures that are to be taken to monitor the significant environmental effects of implementation of the final DP (Section 5).
- Details on the availability of relevant documents (Section 6)

[1] Directive 2001/42/EC of the European Parliament and of the Council on the Assessment of the Effects of Certain Plans and Programmes on the Environment
[2] The Environmental Assessment of Plans and Programmes Regulations 2004

2 HOW ENVIRONMENTAL CONSIDERATIONS HAVE BEEN INTEGRATED INTO THE FINAL DROUGHT PLAN

The Environment Agency Drought Plan Guideline (DPG)[3] states that: '*a Drought Plan should set out the short-term operational steps a company will take before, during and after a drought. These plans are not strategic and should focus on a company's actions if a drought was to occur under present circumstances. Drought plans should show how a company would operate in a range of droughts and present enough information to customers and partners to show what decision making processes a company will make in a drought event'.*

Environmental considerations were incorporated into the development of Severn Trent Water's Drought Plan from the outset, in particular carrying out drought contingency planning studies. Updated Environmental Assessment Reports have been prepared for most of the drought permit/order sites as part of Severn Trent Water's drought contingency planning and are summarised below:

- Derwent Valley Reservoirs (April 2012)
- River Derwent at Ambergate (April 2012)
- Tittesworth Reservoir and River Churnet (finalised in autumn 2013 with sign off expected by spring 2014)
- River Leam at Leamington and the River Avon at Stareton (finalised in autumn 2013 with sign-off expected by spring 2014)
- River Severn at Trimpley (completion expected spring 2014)
- River Wye at Wyelands (in collaboration with Dwr Cymru Welsh Water to be completed by autumn 2014)

The overall scope of the environmental assessment reports met the requirements of Section 7 (Environmental Impacts) of the DPG, including information on likely changes in flow/level regime, assessment of likely impact on features that are sensitive to these changes and mitigation measures that may be required to prevent or reduce effects on sensitive features. This work was carried out in consultation with the Environment Agency and Natural England and Natural Resources Wales[4] as appropriate, and involved the collation of various ecological and environmental datasets and the collection of additional information where necessary to allow the study to be undertaken.

[3] Environment Agency (2011) Water Company Drought Plan Guideline. June 2011.
[4] From 1st April 2013 Natural Resources Wales took over the responsibilities of the Countryside Council for Wales, Environment Agency Wales and Forestry Commission Wales.

The aim has been to produce environmental reports that have been agreed with the Environment Agency, Natural Resources Wales and Natural England such that in the event of a drought they are readily available for refreshing based on the prevailing drought situation at that time. The environmental studies consider all potentially affected habitats and species, including relevant Ramsar and European Sites (Special Areas of Conservation and Special Protection Areas), Sites of Special Scientific Interest (SSSI) and Priority Habitats and Species as identified on the English and Welsh Lists (Section 41, Natural Environment and Rural Communities Act 2006). Information from the detailed environmental assessments was used to inform the SEA and HRA process. The SEA reviewed all the environmental and social effects of the range of drought options included in the Severn Trent Water Drought Plan. A 10km search radius was used to identify those options more likely to have a potential significant effect on any European site (aquatic or terrestrial). Consideration within the SEA was given to the relative locations of options within the same surface and groundwater catchments to ensure that any hydrological connectivity over a larger radius that might affect any water-dependent sites was taken into account. This type of information was used to directly inform the SEA of each drought option, particularly in relation to the SEA topic areas including 'biodiversity, flora and fauna'.

Drought Plans must include all measures that the company may progressively need to take as the severity of a drought increases, including those that would only be needed in the worst possible drought. These will typically have some significant environmental effects, but equally they are extremely unlikely to be required in the period of the plan. As a result, the Severn Trent Water Drought Plan encompasses a basket of measures that are sufficiently flexible to cope with different intensities and durations of drought events. Consequently, the actual impact of the plan over its life is subject to significant uncertainties.

The outputs of the SEA Environmental Report provided a comparative assessment of the environmental effects of implementing each drought option, which was used by Severn Trent Water, along with operational factors, to inform the priority of implementation of each option in its Drought Plan. Due to the differing nature of droughts and differing response of the range of available water sources to the characteristics of an ensuing drought, it is impossible to predict in advance which and how many of the measures will be required. Using the findings from the SEA, Severn Trent Water have set out in their Drought Plan the likely priority of drought measures, seeking to ensure that those measures with the lowest environmental effect are implemented first, whilst measures with the greatest environmental effects would only be implemented in a very severe drought. A number of operational factors will, however, also inform the priority of selection, including water quality, water distribution network capacity and constraints, and water supply asset availability.

The SEA considered a wide range of impacts[5] for the environmental assessment of each drought management option, including the potential cumulative effects with other drought management options in the Drought Plan, other water company drought plans and other relevant plans and programmes. Therefore, in the event of a future drought, the SEA will provide an additional information source and a comparative assessment of the environmental effects of implementing each drought option, including the potential for cumulative effects. Severn Trent Water will be able to use this information, along with operational considerations, to define which options are to be implemented in a drought.

The SEA Environmental Report stated that, in relation to the Water SEA objective, drought options would provide benefit to public water supply reliability in drought conditions, with no permanent adverse effects on the environment. In response to comments made on the SEA Environmental Report by statutory stakeholders (see also Table 4.1 in Section 4 of this Statement), it is acknowledged that there are uncertainties as to whether some of the environmental effects would be temporary or permanent. Whilst most effects are anticipated to be temporary, it will be important to carry out post-drought monitoring to help assess whether any effects are permanent in nature (see also Section 5 of this Statement).

2.1 REVIEW OF ENVIRONMENTAL EFFECTS OF THE DROUGHT PLAN

2.1.1 Demand side options

Demand-side options serve to reduce pressure on water resources by reducing customer demand for water, and therefore reducing the need for supply-side options to abstract more water from the environment. Mixed or adverse effects of demand-side options have been identified with respect to population and human health and the value of water to the local economy where restrictions of water use are involved. These adverse effects increase in significance as more water uses become prohibited.

The SEA assessment of the demand-side option supports the proposed ordering and sequencing of implementation of these options relative to supply-side options as set out in the Final Drought Plan.

2.1.2 Supply-side options

Severn Trent Water's Final Drought Plan contains numerous supply side options. The Final Drought Plan shows which actions Severn Trent will consider in different drought trigger zones. These trigger zones range from normal operations in zones A and B to extreme measures such as drought permits and orders in zones E and F. The majority of the supply side drought management options involve optimising or re

[5] Schedule 2 of the SEA Regulations (Annex I of the Directive) requires the Environmental Report to include information on '*the likely significant effects on the environment, including short, medium and long-term effects, permanent and temporary effects, positive and negative effects, and secondary, cumulative and synergistic effects…*'

deploying existing sources. For example, several of the options associated with drought trigger zone D involve transferring water differently within the Severn Trent Water network. All of the options in drought trigger zones A to D involve operation within existing abstraction licence conditions.

However there are seven of Severn Trent Water's supply-side options that would require a drought permit or drought order to authorise additional abstraction. No construction works are required to make use of these options.

Operationally, the supply-side options are assessed as having a wide range of potential impacts, from major adverse effects on biodiversity, flora and fauna for some options to major beneficial effects for water resource reliability and resilience. The SEA assessment indicated those supply-side options with a lower level of impact that should be considered for implementation in the first stages of a developing drought. Options with a greater impact could be implemented later if the drought intensifies. However, selection of the appropriate option for implementation during a drought will also depend on a range of other factors: the amount of water made available; how effectively this water can be utilised; the spatial distribution of drought impact; prevailing environmental conditions and the time of year.

The SEA assessment highlighted that most of the supply-side options associated with drought trigger zones A to D in the Draft Drought Plan would have no greater than minor adverse effects on the SEA topics. For example, use of the licensed options (Beechtree Lane Borehole, Abbey Green Borehole for non-drought permit use, Siskin Drive, Rothley Brook) have only negligible or minor environmental effects.

The following seven locations could be affected by a Severn Trent Water drought permit or drought order application:

- Tittesworth Reservoir and the River Churnet
- River Leam at Leamington
- River Avon at Stareton
- Derwent Valley Reservoirs
- River Derwent at Ambergate
- River Severn at Trimpley and
- River Wye at Wyelands

The first three of these were assessed as having the least environmental effects. The Derwent Valley and River Derwent were assessed as having slightly greater, but still minor, adverse effects.

By contrast, the remaining two supply-side options have the potential for greater adverse environmental effects. The proposed drought permit and drought order options for the River Severn at Trimpley would authorise additional abstraction during times of low flow and river regulation, leading to lower river flows downstream with moderate adverse effects for water quality and aquatic ecology. The lower river flows resulting from the drought permit or order also have the potential to have an effect on the internationally important environment of the Severn Estuary which is designated as a Special Area of Conservation, Special Protection Area and a Ramsar site. Work carried out to date indicates that even with the drought permit or drought order in place, flows in the River Severn downstream of Trimpley during drought conditions may still be higher than would naturally have been expected due to the benefit of the River Severn flow regulation scheme. Consequently, significant adverse effects on the Severn Estuary are considered unlikely, but given the international environmental importance of the estuary, Severn Trent Water has been carrying out more detailed investigations to confirm this provisional assessment. The findings of these investigations will be presented in an updated Environmental Assessment Report following its sign-off with environmental regulators due by spring 2014.

The drought order option for the River Wye at Wyelands in the Draft Drought Plan is likely to have major adverse effects on the environment. The River Wye is designated for its important aquatic habitats and species (including salmon, lamprey and shad fish species) as a Special Area of Conservation (SAC). The Environment Agency Wales (now part of Natural Resources Wales) completed its review of Severn Trent Water's normal abstraction licence conditions for the River Wye at Wyelands and concluded that they may lead to adverse effects on the designated aquatic features of the River Wye SAC, particularly at times of low river flow. Consequently, a drought order to authorise greater abstraction at times of very low river flows during a drought is likely to exacerbate these effects with adverse implications for the designated aquatic habitats and species.

The environmental implications of the River Wye drought order option have been recognised by Severn Trent Water and the company is working in partnership with Natural Resources Wales, Dŵr Cymru Welsh Water, Environment Agency, Natural England and the Wye and Usk Foundation to further investigate the environmental effects of public water supply abstractions from the River Wye. The investigations commenced in 2012 and are continuing. Severn Trent Water will build on the findings of these investigations to examine the effects of the River Wye drought order

on the SAC which will be reported in an Environmental Assessment Report by autumn 2014.

In parallel, Severn Trent Water also published its draft and revised draft Water Resources Management Plan and long-term Business Plan during 2013 which explored the longer term options to balance supply and demand across the region including in the area supplied from the River Wye.

Decisions on supply-side options to maintain essential water supplies in drought conditions also need to take account of the cumulative assessment of impacts. Greater environmental effects may arise when some of these options are operated in combination with other supply-side options or with programmes or plans of other organisations, particularly other water companies and the Environment Agency.

2.2 REVIEW OF CUMULATIVE EFFECTS

2.2.1 Cumulative Impact Assessment: Demand-Side Options

No adverse cumulative impacts are expected from implementation of one or more demand-side options. The demand-side options are complementary with potential beneficial impacts if implemented together. Cumulative beneficial effects with other water company and Environment Agency drought plans may occur if drought conditions were to arise at the same time and water efficiency campaigns are co-ordinated to maximise the water saving benefits. Demand management measures proposed in the Severn Trent Water revised draft Water Resources Management Plan (2013) would also be complementary with the Final Drought Plan. No other cumulative impacts with other programmes or plans were identified.

2.2.2 Cumulative Impact Assessment: Supply-Side Options

Cumulative effects of each supply side and drought permit/order drought option with each other supply side and drought permit/order drought option were assessed in the Environmental Report. It confirmed that there is the potential for cumulative effects when operating the following drought options at the same time:

- River Derwent at Ambergate with Derwent Valley Reservoirs (Ladybower Reservoir).
- Tittesworth Reservoir and River Churnet with River Derwent at Ambergate and Derwent Valley Reservoirs (Ladybower Reservoir).
- Tittesworth Reservoir and River Churnet with Derwent Valley Reservoirs (Ladybower Reservoir).
- Tittesworth Reservoir and River Churnet with Abbey Green Borehole for non-

drought permit use.

- Beechtree Lane Borehole, River Leam at Leamington and River Avon at Stareton with River Severn at Trimpley.
- River Severn at Trimpley with River Wye at Wyelands.
- Beechtree Lane Borehole with River Severn at Trimpley and/or River Wye at Wyelands.

Cumulative impacts were assessed as no greater than minor adverse for most combination of options. For those options within the River Trent basin (Tittesworth Reservoir and the River Churnet, Derwent Valley Reservoirs and the River Derwent at Ambergate), the potential cumulative impacts of simultaneous operation on the Humber Estuary were also assessed given its designation as a Special Area of Conservation, Special Protection Area and a Ramsar site. The assessment concluded that, given the scale of the additional abstraction and the distance upstream from the estuary, there would be negligible cumulative impact on this internationally important estuary.

For those options within the River Severn basin (groundwater options, River Leam at Leamington, River Avon at Stareton, River Severn at Trimpley), potential cumulative impacts of simultaneous operation on the Severn Estuary designated sites were assessed. The assessment concluded that it was unlikely that impacts on the estuary would be different to the impact of the River Severn at Trimpley option operating in isolation given the negligible impact of the groundwater, Leam and Avon options on river flows to the estuary. However, further investigations are underway as part of the preparation of the EAR for the River Severn at Trimpley. The findings will be reported following regulatory sign-off due by spring 2014.

Cumulative operation of the River Severn at Trimpley and River Wye at Wyelands was assessed as potentially having likely significant effects on the Severn Estuary European Marine Site. This will be further assessed as part of the environmental investigations into both of these options which are currently ongoing.

2.2.3 Cumulative Impact Assessment: Environment Agency and NRW Drought Plans

Assessment of the potential for cumulative impacts of supply side and drought permit/order options with drought options listed in Environment Agency and Natural Resources Wales DPs were undertaken in the Environmental Report.

The information used to carry out the assessments as presented in the Environmental Report has been reviewed following consultation on and finalisation of the Environment Agency DPs. The Environment Agency Midlands Drought Plan and the

Environment Agency Wales Drought Plan (now entitled the Natural Resources Wales Drought Plan) were reviewed.

The Severn Trent Water River Severn at Trimpley drought order option would seek to reverse the conditions of the Environment Agency's drought order on the Severn Trent Water abstraction at Trimpley WTW. If the Appropriate Assessment of the Severn Trent Water River Severn drought order cannot rule out likely significant effects on the Severn Estuary European Marine Site, then it would be necessary for Severn Trent Water to demonstrate that the drought order is required for imperative reasons of over-riding public interest (IROPI). If this scenario arises, Severn Trent Water will need to firstly demonstrate that there are no reasonable alternative solutions and provide supporting evidence to demonstrate that continued abstraction to provide public water supply is even more important than the ecology that may experience short-term harm (and possible long-term damage).

Severn Trent Water supports the reforming of the River Severn Drought Management Group, and agreed in February 2013 with the Environment Agency and South Staffordshire Water to join this group when it reforms. The group will work to determine drought operating agreements with the Canal and River Trust which are also acceptable to Natural England, Natural Resources Wales and others with abstractions on the River Severn. This group will also aim to facilitate appropriate management of available water in the Severn catchment during drought conditions.

2.2.4 Cumulative Impact Assessment: Other Water Company Drought Plans

Assessment of the potential for cumulative impacts of supply side and drought permit/order options with drought options listed in neighbouring water companies' DPs was undertaken in the Environmental Report. This was reviewed following consultation on and publication of revised draft DPs by several water companies. The assessments were informed by each water company's DP and where possible the details in the drought option details tables (equivalent to the DPG[6] Appendix G forms) contained in the appendices of the respective water company DP.

South Staffordshire Water

South Staffordshire Water may seek to apply for a drought order in the scenario that the EA has implemented its River Severn Drought Order. Severn Trent Water are committed to working collaboratively with South Staffordshire Water, the Environment Agency and other interested parties in order to facilitate appropriate management of available water during drought conditions.

[6] Environment Agency (2011). Water Company Drought Plan Guideline. June 2011.

United Utilities Water PLC

The United Utilities Water PLC revised DP contains a drought permit option to reduce compensation flow to the River Vyrnwy from Lake Vyrnwy from 45 to 25 Ml/d. Releases from Lake Vyrnwy are used to help regulate the River Severn.

An Environmental Report has been prepared for United Utilities' Lake Vyrnwy drought option[7] and this concluded that the hydrological influence of the drought option extends to Llanymynech gauging station on the Afon Vyrnwy (i.e. upstream of the confluence of the Afon Vyrnwy with the River Severn and 200 km upstream from the Severn Estuary SAC). None of Severn Trent Water's drought options have been identified to affect the areas within the hydrological zone of influence of the Vyrnwy drought option, and therefore no in-combination impacts of Severn Trent Water's drought options with the United Utilities' drought option at Vyrnwy have been identified, including the Severn Estuary European Marine Site.

Dwr Cymru Welsh Water

Dwr Cymru Welsh Water (DCWW) are yet to publish an updated DP, but Severn Trent Water is committed to working collaboratively with DCWW on the environmental monitoring, reporting and mitigation associated with any potential DCWW River Wye drought orders.

The existing Severn Trent Water abstraction licence has been assessed under the Review of Consents process to have an adverse effect on the integrity of the River Wye SAC. Consequently, a drought order to enable abstraction to continue at flows below the normal prescribed flow is equally likely to have likely significant effects on the SAC downstream of the abstraction point. An Appropriate Assessment would therefore be required of this drought order to further understand the potential effects, including in-combination effects with any DCWW drought orders.

A range of investigations are currently underway to examine the effects of public water supply abstraction on the River Wye and the implications of the licence changes being implemented under the Review of Consents process. An Appropriate Assessment may be required once existing investigations and Review of Consents abstraction licence changes has been concluded. Additionally, the need for a drought permit will be reviewed following completion of the Severn Trent Water WRMP in 2014. For these reasons, a new Environmental Assessment Report is planned for completion by autumn 2014, followed by an Appropriate Assessment if this continues to conclude likely significant effects on the River Wye SAC and/or the Severn Estuary European Marine Site.

[7] United Utilities (2010) Environmental Assessment of the Impact of a potential drought permit in the Vyrnwy Reservoir system. Prepared by APEM and Hyder Consulting.

The HRA screening report has concluded there are no likely significant effects on other European sites within the zone of influence of these drought orders, including the Wye Valley Woodlands SAC, the Wye Valley & Forest of Dean Bat sites SAC, Elenydd-Mallaen SPA, Ellenydd SAC, Elan Valley Woodlands SAC.

Severn Trent Water provides a bulk supply to DCWW from its Mitcheldean WTW and is in discussions with DCWW as to how this arrangement would be managed during a drought.

Anglian Water Services Limited

No cumulative impacts between drought options in the Anglian Water Services DP have been identified. A bulk supply agreement with Anglian Water (the 'Wing one' agreement) provides small amounts of water (18 Ml/d) to rural Rutland. This supply does not automatically vary with any drought management measures, and the agreement does not stipulate that Severn Trent Water will reflect any drought management measures that Anglian Water have to impose on its customers that are fed from their Wing WTW system. Nevertheless, in such circumstances, Severn Trent Water will liaise closely with Anglian Water to minimise the impact on customers whilst supporting Anglian Water's efforts to maintain supplies from the Wing WTW system.

Bristol Water PLC

No cumulative impacts between drought options in the Bristol Water DP have been identified.

Bristol Water does receive raw water supplies from the Canal and River Trust from the River Severn at Gloucester via the Gloucester and Sharpness Canal with a maximum average abstraction of 210 Ml/d under normal operating conditions, with a 15 Ml/d reduction at times of high tide. There are no plans to alter this abstraction during a drought and the impact of this abstraction is already accounted for in the measured flow records used as the baseline for drought permit assessment, in the same way as other licensed abstractions are also taken into account in environmental assessment. Severn Trent Water will however liaise with the Canal and River Trust as part of wider discussions on drought management activities through the River Severn Drought Management Group.

Yorkshire Water Services Limited

No cumulative impacts between drought options in the Yorkshire Water Services Final DP have been identified.

The Yorkshire Water drought plan includes over 40 drought permit options for water sources within river catchments draining to the Humber Estuary European Marine

Site. The HRA of the Yorkshire Water draft drought plan 2011 concluded that there would be no cumulative, in-combination likely significant effects on the Humber Estuary European Marine Site. The cumulative impacts of the Severn Trent Water drought permit on the Humber Estuary European Marine Site have been assessed in the HRA screening report as having negligible impact on flows to the Humber Estuary. Consequently, the overall in-combination impact of the Severn Trent Water and Yorkshire Water drought plans is assessed as having no likely significant impact on the Humber Estuary European Marine Site.

In 1989, Severn Trent Water and Yorkshire Water entered into an agreement for the supply to Yorkshire Water of untreated water from the Derwent Valley reservoirs. The amount that can be taken by both Yorkshire Water and Severn Trent Water is set in operating guidelines However, there is provision in the agreement to modify these rules and this occurred during the droughts of 1995-96 and in 2003.

In the event of serious drought in Severn Trent Water's region, such as that in 2011-2012, Yorkshire Water could assist by taking a reduced supply from the Derwent Valley reservoirs. The response from Yorkshire Water will depend upon the prevailing water resource situation in Yorkshire. This could potentially delay the implementation of the Derwent Valley Reservoir (Ladybower Reservoir) drought permit option.

Wessex Water

Wessex Water has one option in its Draft Drought Plan 2012 with the potential to impact on the Severn Estuary European Marine Site: additional abstraction from the Bridgwater and Taunton Canal, with the potential to reduce flows to the River Parrett (which discharges to the southern end of the Severn Estuary European Marine Site at Bridgwater Bay). Assessment of this option by Wessex Water in their Drought Plan is that there would be no likely significant effects on the Severn Estuary European Marine Site. Given the small scale of the potential impact, it is concluded that cumulative, in-combination impacts with the Severn Trent Water drought plan would be negligible with no likely significant effects on the European Marine Site.

Thames Water Utilities Limited

No cumulative impacts between drought options in the Thames Water Utilities Limited DP have been identified.

Dee Valley Water

No cumulative impacts between drought options in the Dee Valley Water Draft DP 2006 have been identified.

2.2.5 Cumulative Impact Assessment: Water Company Water Resource Management Plans

A check has been undertaken on applicable PR14 draft WRMPs and any potential cumulative impacts. Thames Water has no options within their preferred programme that include the transfer of water from the Severn to the Thames. A number of investigations have been carried out; however there will be no investment in the development of these options until the next round of WRMPs in 2019. South Staffordshire Water's draft WRMP highlights it is actively discussing the future potential to provide Severn Trent Water with water to address the latter's supply demand deficit. A check has been undertaken on applicable draft WRMPs and there are no current cumulative impacts that have been identified with the latest published Draft or Revised Draft WRMPs of Severn Trent Water or neighbouring water companies as at January 2014.

2.3 CUMULATIVE IMPACT ASSESSMENT: OTHER PROGRAMMES AND PLANS

The Welsh Government has published its Infrastructure Investment Plan (2012), outlining the broad vision for water in Wales which is to have a safe, clean, sustainable and affordable water supply, including a high standard for environmental water quality. The Welsh Government provides the overall policy steer but also has various statutory functions in respect to obligations associated with managing water resources and water availability and ensuring security and resilience requirements are complied with. Discussions will be convened at applicable times, regarding abstraction management during times of drought.

The Canal and River Trust is currently in the process of updating its internal DP. Their previous DP has not been published, but discussions regarding abstraction management during times of drought are on-going with the Canal and River and will continue in the future via forums such as the River Severn Drought Management Group and the Rivers Usk and Wye Abstraction Management Group.

No other cumulative impacts with other programmes or plans were identified.

2.4 CUMULATIVE IMPACT ASSESSMENT: HABITAT REGULATIONS ASSESSMENT

The cumulative assessment in the SEA Environmental Report utilised the Habitats Regulation Assessment (HRA) findings throughout the assessment and is discussed in the assessment sections of the SEA. In response to Natural Resources Wales consultation feedback, it is acknowledged that this could have been stated more

clearly in the methodology section. This section therefore clarifies the methodology applied with respect to Habitats Regulations Assessment.

The HRA report documents the development of the assessment of Severn Trent Water's water resource drought management options included in its Final Drought Plan in relation to potential likely significant effects (LSE) of an option on one or more designated "European" sites, including Special Protection Areas (SPAs) and Special Areas of Conservation (SACs) (also known as "Natura 2000" sites).

A 10km search radius was used to identify those options more likely to have a potential significant effect on any European site (aquatic or terrestrial). In addition, consideration was also given to the relative locations of options and designated sites within the same surface and groundwater catchments to ensure that any hydrological connectivity over a larger radius that might affect any water-dependent sites was taken into account. Similarly, consideration was also given to the potential effects on designated migratory species using river corridors (for example, Atlantic salmon and sea lamprey species), regardless of the distance from the drought option.

The findings of the HRA screening report were used to directly inform the SEA of each drought option, particularly in relation to the SEA topic on 'biodiversity, flora and fauna'.

3 HOW THE ENVIRONMENTAL REPORT INFLUENCED THE DROUGHT PLAN

Information from the Environmental Report, the HRA Screening Report and the updated EARs was used to help refine and finalise the DP. In particular, the SEA and supporting data were used, together with operational considerations, to assist in assigning priority levels to the options for implementation in a drought. This information comprised effects of the individual options within each WRZ (including identification of mutually exclusive schemes) and cumulative effects within and between different WRZs, with existing Severn Trent Water abstractions and with neighbouring water company DPs.

Specific examples of how the findings from the SEA were integrated into the DP are described in Table 3.1.

Table 3.1 SEA ER Findings and their Consideration in the DP

SEA ER Finding/Output	How Findings Integrated into the DP
Individual scheme assessments were undertaken. Potential cumulative scheme effects and mutually exclusive schemes were also identified.	On the basis of these assessments, SEA outputs were integrated into the DP by influencing the priority level and implementation sequence for each demand-side and supply-side drought option.
The SEA confirmed that the Wyelands and Trimpley drought options could result in significant adverse effects on the environment.	The DP identifies in Section 4.1 that these drought options will only be implemented at drought zone trigger F after all other demand and supply side alternatives have been implemented, and that they are effectively last resort actions. Further investigations are continuing to assess the precise scale of any impacts.
The SEA identified that significant uncertainty surrounds the potential effects of the Wyelands and Trimpley drought options.	The DP clarified the timescales for completing the EARs for these drought options which will provide more certainty as to the potential effects.
The individual scheme assessment of the Siskin Drive drought option identified that effects on water quality are uncertain and require further investigation.	The DP identifies that a discharge permit will be required to implement this option and considers potential mitigation measures (e.g. fish rescue). The DP also records monitoring STW will engage in with respect to this option.
The individual scheme assessment of Rothley Brook drought option considered the impact of the drought option is unlikely to be of significant intensity but that it has potential to affect Bradgate Park and Cropston Reservoir SSSI.	The DP identifies that consultation will be required with the Environment Agency and Natural England and other relevant stakeholders/conservation bodies.

4 CONSULTATION ON THE SEA

4.1 CONSULTATION ON THE SEA

The SEA process comprised several consultation stages, as follows:

- An SEA Scoping Report was issued in November 2012 to statutory consultees and opinions were sought on the proposed scope and level of detail proposed for the SEA.
- The SEA Environmental Report was published with the Draft Drought Plan on Severn Trent Water's website on 10 May 2013. A Habitats Regulation Assessment Screening Report was also completed at the same time. A number of responses were received during the consultation period, which ran until 15th July 2013.
- Responses to the SEA Environmental Report consultation were considered alongside responses to the Draft Drought Plan in producing a Revised Draft Drought Plan in August 2013. Severn Trent Water also prepared a Statement of Response to accompany the Revised Draft Drought Plan setting out how it had taken the comments into account and the changes to the Revised Draft DP made as a result.

The Environment Agency provided an assessment to Defra as to whether the changes proposed in the Statement of Response addressed the representations received during consultation. On 6 January 2014, Defra wrote to Severn Trent Water granting permission to publish the Final Drought Plan in accordance with regulation 6 of the 2005 Regulations. The letter requested Severn Trent Water to publish the Final Drought Plan within a month of receiving the letter and to clarify a few points.

With respect to one of the issues raised within the SEA process, Defra requested that Severn Trent Water include a commitment in the Final Drought Plan that should the Appropriate Assessments for the River Severn (Trimpley) or River Wye (Wyelands) drought order/permits conclude that there could be likely significant effects on designated European sites, a case for over-riding public interest would need to be made, including the pre-requisite requirement to demonstrate that there are no feasible alternative solutions to reliance on these orders/permits (refer to Section 4.1 of the Final Drought Plan). In response to this, the following text has been added to the Final Drought Plan for the relevant options:

> ***River Severn at Trimpley*** *– In the extremely unlikely event that we need a drought order for Trimpley before we have completed the environmental assessment report we will only apply to Government after first consulting with key stakeholders such as Cyfoeth Naturiol Cymru/*

Natural Resources Wales (NRW), Natural England and the EA. We recognise the severity of this measure and before applying for a drought permit/ order we will implement the 'Strategic Grid West' options shown in section 7.4 of this plan. In addition, as requested by the letter we received from Defra on 6 January 2014, we include a commitment that: If the Appropriate Assessment for the drought order at Trimpley concludes that there could be 'likely significant effects' on the Severn Estuary European site, we will set out the case for over-riding public interest. This includes the requirement to demonstrate that there are no feasible alternative solutions to rely on other than this drought order. We will review the feasibility of all alternative solutions before we update this drought plan. As stated in the final sentence of section 4.1, we will update this plan after we have completed the Wyelands EAR.

River Wye at Wyelands *- In the unlikely event that we need a drought order for Wyelands before we have completed the environmental assessment report we will only apply to Government after first consulting with key stakeholders such as Cyfoeth Naturiol Cymru/ Natural Resources Wales (NRW), Natural England and the EA. We recognise the severity of this measure and before applying for a drought permit/ order we will implement the options shown in figure 6 of this plan. In addition, as requested by the letter we received from Defra on 6 January 2014, we include a commitment that: If the Appropriate Assessment for the drought order at Wyelands concludes that there could be 'likely significant effects' on the Severn Estuary European site, we will set out the case for over-riding public interest. This includes the requirement to demonstrate that there are no feasible alternative solutions to rely on other than this drought order. We will review the feasibility of all alternative solutions before we update this drought plan.*

Changes to the SEA made as a result of consultation are summarised in Section 4.2.

4.2 CONSULTATION RESPONSES

A number of responses on the Environmental Report were received during the consultation period, which ran until 5 July 2013. Representations were generally made in concert with comments on the draft Drought Plan and consequently there was a degree of overlap. It was therefore decided to address all comments within the Severn Trent Water Statement of Response. The responses that were directly or indirectly applicable to the Environmental Report are summarised in **Table 4.1.**

Table 4.1 Summary of representations made directly or indirectly on the SEA Environmental Report and responses

Organisation	Comment	Response
Consumer Council for Water (CCWater)	No representation on the SEA.	No changes required.
Environment Agency	The EA raised several issues of relevance to the SEA and HRA: Environmental Assessment Reports (EARs) should be completed in a timely manner. They referred specifically to completion of the Severn and Wye EARs.	The delivery programmes for the Severn and Wye EARs were reviewed to see if delivery dates could be brought forward. Overall, both plans should now be complete by autumn 2014 rather than December 2014. Significant changes have been made to section 4.1 of the Final DP to describe actions to be taken in the extremely unlikely event that a drought order is required at either Wyelands (on the R. Wye) or Trimpley (on the R. Severn) before these EARs are complete. Severn Trent Water has committed to update its plan when these EARs are complete, although as these would not constitute a material change to the plan, a further formal consultation exercise will not be appropriate.
	Provide details of any approvals/ permits that would be needed to implement drought management measures or the associated mitigation measures to ensure compliance with the Drought Plan Direction 2011 4(b) and 4(f).	A new section has been created in the Final Drought Plan to address this (Section 3.4.1) and to provide the necessary details. The SEA had set out many of the mitigation measures and helped to provide the details in the Final DP.
	Include information on eel passage in the completed EARs for Tittesworth and the Avon/ Leam.	Severn Trent Water has been working with the EA to agree what is required in relation to the Eel Regulations, but this is not a direct drought plan issue. The EA's data on eel issues does not include any mention of the Tittesworth/ Churnet intake. This is probably because barriers (such as the reservoir dam) and the long distance from the tidal limit prevent Eels from being present at the intake as assumed in the SEA appraisal of this option. Therefore, eel passage information does not appear to be relevant to the Churnet/ Tittesworth EAR. The EAR for the Avon/ Leam also does not need to include specific information on eel passage. The main reasons for this are that the fish monitoring for the Avon/ Leam EAR records eels when are present and Severn Trent Water is working collaboratively with the EA to address fish passage issues at Stanford reservoir in the Avon catchment as part of the WFD assessment of heavily modified water bodies (HMWBs)
Natural England	Expressed some concerns about the way in which the findings of the HRA are to be incorporated into our final plan.	The findings from the HRA screening have been explicitly considered in the development of the SEA, which in turn has informed the development of both the draft and final DP. In particular, the HRA and SEA has emphasised the need to ensure that drought permits/ orders that have the potential to impact on Natura 2000 sites are only implemented after all other available options in

Organisation	Comment	Response
		the DP have been put in place.
	The draft HRA is not able to show if several protected areas will not suffer Likely Significant Effect and they think it is unclear if there is a 'fall-back' position to avoid this.	This is linked to the issue the EA (and NRW) also raised about the Habitats Directive sites on the River Severn and River Wye. Several changes to section 4.1 of the DP have been made stating that in the unlikely event of applying for a drought order before the EARs are complete, an Appropriate Assessment with the data that are available at the time will be carried out. This is part of the 'fall back' position as are the changes made to Section 4.1. These changes include clarifying that drought permits/ orders for Wyelands and Trimpley are effectively last resort options. In addition, Severn Trent Water has committed to update its drought plan when it has finished the Severn and Wye EARs. The Final DP also refers to working with NE on both EARs in Section 4.1.
	The dependencies that the drought plan has on the WRMP means that the 2 documents "cannot be considered alone". They also ask if we can ameliorate the impacts of our drought plan actions by different options in the next WRMP and ask us to clearly identify this in both the plans.	Although there are dependencies between plans, readers can consider this plan alone as other organisations have been able to do. To make it easier for readers to understand what the purpose of our different plans is, a table has been added to section 7.4 in the Final Drought Plan. The SEA and HRA both assess the potential for cumulative impacts between the Drought Plan and WRMP as set out in the Environmental Report and in this Post Adoption Statement.
	Unclear how the impacts on biodiversity and protected sites will be considered when deciding the order and extent of the drought options within the plan. Seek clarity on clear lines of responsibility to show that the management process is HRA compliant.	Section 5.1 has been edited for the Final Drought Plan in response to this. It has been made clear that responsibility for considering protected sites, the environment and biodiversity lies with the water resources planning manager. The SEA and HRA will be used during a drought, alongside the Drought Plan, to ensure the environmental implications of drought plan options are fully considered in decision-making.
	HRA- General HRA needs to consider the in combination effect of other related plans in more detail. The lack of completion of the HRA assessments for the Severn and the Wye and, potentially the in combination impact on the Humber, could lead to a final plan that was not Habitat Regulations compliant.	The 'in combination' assessments are reflected in the Final HRA report. This takes account of recently published Drought Plans and draft Water Resource Management Plans of other water companies. Severn Trent Water acknowledges these concerns and has been working to complete the EARs for the River Wye and River Severn options to inform the HRA process. Updated timescales for the EARs are included in the Final Drought Plan. STW have updated the 'in combination' assessment for the Humber in the Final HRA report (see below). Defra has given permission to Severn Trent Water to publish the Final Plan with a commitment to complete the EAR work and associated HRA elements.

Organisation	Comment	Response
	HRA- Humber Estuary SPA/ SAC Need a more detailed analysis of the potential impacts on the Humber Estuary SPA/SAC with relation to the impacts of Yorkshire Water's draft water resources management plan (WRMP) and drought plan.	The Derwent Valley /River Derwent EAR considered the flows into the Humber Estuary SAC as shared with NE. The EAR concluded that the potential impacts were negligible both alone and 'in combination' with Yorkshire Water's drought plan options. The Final HRA has taken account of the recently published draft WRMPs for Severn Trent Water, Anglian Water and Yorkshire Water in an updated cumulative assessment. However, given the scale of these drought permit options and their distance upstream of the Humber Estuary SAC/SPA, it is unlikely that there would be likely significant effects. The key issue relating to the Humber Estuary is dissolved oxygen concentration in the Lower River Ouse. The River Trent flows into the river system downstream of the impacted river reaches and would not exacerbate the low dissolved oxygen problem.
	HRA- Severn Estuary SPA/ SAC Ensure that consider the' in combination' effect of the Environment Agency's drought plan for the Severn with the Severn Trent Water drought permit/order.	Severn Trent Water is working with the EA, South Staffordshire Water, NRW and others to ensure that 'in combination' effects of the drought plan are considered for the River Severn. The EA's environmental report for its River Severn drought order includes an 'Appropriate Assessment' that considers the 'in combination' effect of the Trimpley drought permit/order as well as the EA drought order. This information is being considered in preparing the EAR for the River Severn drought permit/order.
	HRA- River Wye Concerns about the lack of available options in the plan should the future Appropriate Assessment identify a significant impact	The options available to supply the area currently fed from the Wyelands abstraction are very limited in the event of a severe drought. The drought plan has set out all of the options that are feasible and available, ensuring that this drought order is a last resort and that all the other options in our Final DP are implemented first.
Natural Resources Wales	**Recommendation 4 - Environmental Assessment Reports for drought permit/orders** Recommend that either complete the Severn and Wye EARs to inform the final drought plan or, as a minimum, in time to inform a drought permit/ order application. Suggest that the EARs/ HRA are carried out with existing information and consult with them in relation to both EARs. Suggest that should not use the ongoing Review of Consent work as a reason for	This is similar to the issue the EA raised (see above). Severn Trent Water has made several changes to Section 4.1 of the Final DP in response to this recommendation. One change was to remove the Review of Consent work as a reason for not finishing the Wye EAR sooner. In the unlikely event of applying for a drought order before the EARs are complete, then an Appropriate Assessment will be carried out with the data available at the time. The DP will be updated once the Severn and Wye EARs are finished and NRW has been consulted.

Organisation	Comment	Response
	delaying the Wye EAR.	
	Recommendation 5 – Environmental monitoring • Set out our proposals for environmental monitoring during a drought and post drought • Give more detail about mitigation measures	Proposals for baseline monitoring are summarised in the Final DP. 'In drought' and 'post drought' monitoring are covered in the DP and as set out in section 4.2 of the Final Drought Plan, Severn Trent Water has agreed Site Investigation Plans (SIPs) with the EA for the EARs that are finished or almost finished for sites in England. This sets out the agreed sites where data are needed and reduces duplication or missing important data. Severn Trent Water is working with NRW and the EA to produce the Severn and Wye EARs and this will provide the opportunity to agree which sites should be used. When these EARs are completed, further clarification on monitoring requirements for the River Severn and River Wye will be provided. Text has been added into section 2 of the Final Drought Plan to describe monitoring sites which act as triggers and data. In terms of mitigation measures, these are described in section 4.3 of the Final DP and in the relevant sections of the EARs.
	Timing of environmental assessment completion Recommend that prepare EARs and appropriate assessments for River Severn at Trimpley and River Wye at Wyelands using available data and update when planned monitoring for baseline data is completed. Ask that NRW is consulted throughout this process.	This has already been covered in relation to the first point the EA raised and when addressing the NRW recommendation 4. In addition, EARs have previously been produced for both of these options, but they do require updating. The updates are in progress and Severn Trent Water has committed to updating these to the timescales set out in the Final DP. The timescale takes account of the monitoring being carried out under the wider Wye and Usk Investigations Programme. Severn Trent Water will consult with NRW on these reports.
NRW's separate response to the SEA Environmental Report	**Appropriate Assessment of Wyelands drought order** Recommend that do not use the review of Consents (RoC) on the River Wye as a reason for delaying the production of the EAR and appropriate assessment for of the Wyelands drought order because it is unlikely that the licence changes associated with this work will be implemented within the timeframe of the drought plan.	Section 4.1 of the Final Drought Plan and this Statement of Response no longer refers to the Review of Consent work needing to be complete before the finalisation of the Wye EAR. However as the Review of Consents work has led to additional monitoring under the Wye and Usk Investigations Programme, Severn Trent Water wishes the updated EAR to take account of the latest and most complete monitoring data. When the EAR is complete, it will help provide the information that NRW require to complete the Appropriate Assessment. Severn Trent Water will consult with NRW on the work over the coming months.
	Recommend that clearly state in our drought plan that will only apply for drought permit/orders for the River Severn at Trimpley and River Wye at Wyelands if have exhausted all alternative supply options and implemented appropriate demand side options.	The Final Drought Plan provides text and decision flow charts that show details of the order in which different drought management actions will be implemented. This indicates the intention to use drought order/permits only once all other feasible supply-side options and demand-side options, including Temporary Use Bans, have been put in place. Section 4.1 has been changed in the Final Drought Plan to show that these drought order options are effectively

Organisation	Comment	Response
		last resorts.
	Other clarifications in Annex A 1. Use the word effect instead of impact 2. Agree with SEA finding of adverse effects from River Severn at Trimpley and River Wye at Wyelands options 3. Need for additional consideration of potential effects arising from less dilution due to low flows and temperature changes due to low flows. 4. Uncertainty inherent in the use of the word 'may': "Work carried out to date indicates that even with the drought permit or drought order in place, flows in the River Severn downstream of Trimpley during drought conditions may still be higher than would naturally have been expected due to the benefit of the River Severn flow regulation scheme" p4 5. Agree with SEA finding of major adverse effects and cumulative effects on the River Wye. Recommend that progress with the EARs and Appropriate Assessments 6. Agree with the statement that drought management options may have 'different environmental effects dependent on the season of implementation'. Should also consider the seasonal presence and varied life cycles of many 'features of interest' in SAC watercourses affected by this draft drought plan e.g. salmon, eel, allis and twaite shad etc. It is unclear what worse case scenario is being applied in assessing significant effects. Expressed the view that a "generic" worst case would not be appropriate and request clarity on what constitutes worst case and whether this	 Addressed. This point has been noted. The SEA provides a strategic assessment of the drought plan options and the assessed effects have taken account of reduced dilution and higher temperatures arising under low flow conditions. Severn Trent Water will consider these hydrological and ecological impacts in further detail in the EARs. The hydrological assessment work carried out as part of the River Severn EAR will address this uncertainty and demonstrate the extent to which the Severn Regulation Scheme maintains low flows higher than would occur naturally in a drought. Noted this – Please also see response on the timings of the EARs and provision of information to NRW to complete the Appropriate Assessments. The assessments presented in the SEA were based on 'worst case' conditions specific to the option under consideration, including any specific timing of the measure where applicable (e.g. winter only, moderate to high flows only), and considering life cycles of 'features of interest'. The strategic nature of SEA inevitably requires a composite view to ascribe a single 'significance of effect' rating. Specific details for specific species are set out in the EARs.

Organisation	Comment	Response
	is generic to the assessment or specific to options would be beneficial <u>Baseline and context</u> 7. Welcome the incorporation of scoping stage comments 8. Suggest consider the Welsh Government Infrastructure Investment Plan in addition to the UK Government's Infrastructure Plan 9. Suggest consider the NRW drought plan (currently titled Environment Agency Wales drought plan) 10. Refer to Shoreline Management Plans and Forest Design Plans <u>Review of baseline conditions</u> 11. Welcome the reference to hydrological continuity, however they suggest for the purposes of clarification, the environmental baseline should make clear that consideration of hydrological connectivity and ecological connectivity must include areas both downstream and upstream of water resources supply points. 12. Refer to those areas in Wales which are included on the Register of Historic Landscapes. 13. Welcome clarification on what is meant by 'irreversible damage' to natural heritage.	 This point has been noted. The plan has been reviewed and acknowledged in this Post Adoption Statement (see Section 2.4). The EA Wales drought plan was considered in carrying out the SEA (Table 2.1 on p30). This Post Adoption Statement makes reference to it as the NRW drought plan. Relevant shoreline management plans have been considered as noted in Table B.1 in the SEA. We have considered hydrological and ecological connectivity upstream and downstream of abstraction sites, and have made this point clearer in this Post Adoption statement. Register of Historic Landscapes was considered for both relevant areas of England and Wales throughout the baseline section (see page 40 and p210) Irreversible damage refers to damage which leads to a permanent loss or degradation such that the current condition (prior to the impact occurring) cannot be restored.

Organisation	Comment	Response
	14. Suggest additional issues include the resilience of infrastructure and resources to climate change effects and the need to supply water resources within environmental limits and capacities.	This has been noted. The SEA objectives and indicator questions do pick up these issues and were a consideration in carrying out the assessments. In particular, the following SEA objectives (see Table 3.1 of Environmental Report) sought to encompass these issues: • To adapt and improve resilience to the threats of climate change. • To ensure reliable, resilient and sustainable water resources for people, economy and the environment.
	15. Suggest that refer to the need to maintain waters in terms of their ecological functions, capacities and limits.	Comments noted. The following factors were encompassed in the SEA objectives and indicator questions: • The need to sustain and improve the resilience, flexibility and sustainability of water resources in the region. • Balance the abstraction of water for supply with the other functions and services the water environment performs or provides.
	16. Suggest that refer to the need to maintain soils in terms of their ecological functions, capacities and limits and their role in carbon storage, e.g. peat.	• The need to protect, maintain and enhance peat land and organic soils within the region.
	<u>Methodology</u> Table 3.1 17. Suggest that indicator questions should acknowledge the need to protect and maintain ecological functions and respect environmental capacities and limits.	The indicator questions for Biodiversity encompassed these points, include the following (see page 47 of Environmental Report): • Will it contribute to the sustainable management of natural habitats and ecosystems, i.e. within their limits and capacities?
	18. Suggest that the word 'efficient' be replaced by 'sustainable'	The following indicator questions cover this issue of sustainability and efficiency: • Will it help to encourage sustainable design or use of sustainable materials (e.g. supplied from local resources)? • Will it minimise the use of energy and promote energy efficiency or support the use of sustainable/renewable energy?
	Soils 19. Suggest that indicator questions should acknowledge the need to protect and maintain	This point is reflected in the following indicator question: • Will it protect and enhance the quality of soils?

Organisation	Comment	Response
	ecological functions and respect environmental capacities and limits.	
	20. In respect of cumulative effects, refer to the Habitats Regulations Assessment for this draft drought plan	The cumulative assessment utilised the HRA findings throughout the assessment and is discussed in the assessment sections of the SEA. It is acknowledged that this could have been stated more clearly in the methodology section. We have clarified this methodology in Section 2.5 of this SEA Post-Adoption Statement.
	<u>Assessment of drought options</u>	
	21. River Severn at Trimpley	
	Given this assessment's finding of major adverse effects on water quality and hydrodynamics, not surprised that similar major adverse effects have not been identified in respect of biodiversity and other environmental topics. NRW agree that sequencing of option implementation will be dependent on the spatial distribution of drought. NRW suggest that the severity of potential adverse effects will also be time dependent.	The assessment considered the implications of additional abstraction at Trimpley on river flow and water quality as being major adverse, in the immediate downstream reach, but with impacts diminishing downstream such that overall effects on biodiversity and other environmental features would be minor adverse. The EAR will provide more information on these effects.
	Require reassurance that the sequential approach for option implementation will make clear that the option for the River Severn at Trimpley will, notwithstanding the conditions of drought, only be considered where all other, less damaging options and measures have been exhausted.	As stated in the earlier response to the issue of EAR timing, Section 4.1 of the Final Drought Plan now shows that this option is effectively a last resort measure.
	22. Forest and Stroud (River Wye at Wyelands)	The response above also applies to this point.
	Reassurance required that the sequential approach for option implementation will make clear that the option for the Wyelands will, notwithstanding the conditions of drought, only be considered where all other, less damaging options and measures have been exhausted.	

Organisation	Comment	Response
	23. Dŵr Cymru Welsh Water (DCWW) Welcome intention to work with DCWW on the environmental monitoring, reporting and mitigation associated with potential DCWW River Wye drought orders. Welcome proposal for collaborative working in respect of potential cumulative effects of our drought options and DCWW options. NRW note the requirement for 'Appropriate Assessment' under the Conservation of Habitats and Species Regulations 2010 (as amended) for existing abstraction licence/drought order. Without completing an Appropriate Assessment and EAR in advance of requiring a drought order/permit, it will make the application process much more difficult and is likely to cause delay to any determination process. 24. Thames Water. Note that cumulative effects between Severn Trent Water drought options have only been considered in respect of Thames Water's 2012 draft drought plan. Requested clarification as to whether intend to consider potential cumulative effects in respect of options contained within Thames Water's developing water resources management plan. 25. Canal and River Trust drought plans Note and welcome the continuing discussions with the Canal and River Trust. Request clarification as to whether these discussions are in the context of currently unlicensed abstractions.	Importance of completing the EAR and provision of information to NRW to complete an Appropriate Assessment is made in the SEA and HRA. Severn Trent Water is working in partnership with other companies and regulators to update the baseline environmental understanding through monitoring activities and preparing the assessments. STW aims to complete the EAR as soon as possible and by autumn 2014 at latest and will consult NRW on this assessment. The cumulative effects of neighbouring water company Water Resources Management Plans were assessed and reported in Section 5.8 (see page 80 of the Environmental Report), as available at the time of preparing the Environmental Report. The cumulative assessment presented in this Post Adoption Statement confirms no specific cumulative effects with the options presented in the Thames Water revised draft WRMP. The EAR work considers the (unlicensed) authorised abstractions by the Canal and River Trust.
	Introduction: Note that the HRA 'screening'/test of significance has been based on an initial 10km search	The screening did include upstream and downstream of the abstraction point and this has been made clearer in the final version of the HRA which will be

Organisation	Comment	Response
	radius but that potential effects from hydrological connectivity have been considered in the context of 20kms. Suggest that the report should make explicit that hydrological links may be both upstream and downstream. Also concerned that 10km search areas may not necessarily account for those 'mobile species' which are 'features' of a European site but which may travel significant distances 'off site'.	issued with the final drought plan. This is clarified in this Post Adoption Statement. Whilst a distance has been used to screen for sites and features, mobile species in a wider context have been considered (for example, designated migratory fish species, bird species and bats). Reference to these species in the individual assessments has been made but this point has been made clearer in the methodology section of our final HRA report and in this Post Adoption Statement.
	Suggest that given the cross- border hydrological links, it would be useful for a map to be provided indicating the location and context of options, the European sites potentially affected and additional information relating to the current licences.	A map has been produced indicating the location and context of the options for the final HRA report.
	Other clarifications in Annex A: <u>Assessment of drought options</u> 1. River Leam at Eathorpe/ River Avon at Stareton Note the presence of European Eel downstream of the abstraction points and our HRA's 'finding' that the impacts of the drought permit 'alone', are not considered likely to have a significant effect on the migratory fish species- including European Eel, designated under the Severn Estuary Ramsar site. See comments on Table 4.1. 2. Option: River Wye at Wyelands. Note and agree with this assessment's finding for a 'likely significant effect' on the integrity of the River Wye SAC and the requirement for this option, alone and 'in combination' to be subject to 'appropriate assessment'. Request clarification as to whether	The assessment is in line with the conclusions of the EAR for this drought permit option which concluded that the operation of the drought permit is not likely impact migratory fish. Specific reference to Eel is included in the final HRA report. Once complete the outcome of the EAR will include an assessment of in combination effects arising from other pressures, including other abstractors and discharges. Results of the assessment cannot be prejudged.

Organisation	Comment	Response
	consider potential 'in combination' effects likely in the context of other stressors and pressures including discharges and as a result of less dilution. NRW understand that collecting additional baseline monitoring data to inform the EAR and Appropriate Assessment. In the meantime, recommend that carry out the environmental assessments based on existing baseline data to inform the final plan or as a minimum to inform a drought permit/order application. Once the additional baseline data is available, NRW recommend that update the EAR and appropriate assessment and review the drought plan and the associated SEA and HRA including the in-combination assessments. Without completing an appropriate assessment and EAR in advance of requiring a drought order/permit, it will make the application process much more difficult and is likely to cause delay to the determination process. <u>In combination Screening.</u> The HRA process requires consideration of likely significant effects 'in combination' with other plans and projects. Suggest that have apparently only considered potential 'in combination' effects from other drought plans. They request further explanation and clarification of all those plans and projects considered within this 'in combination' effects screening.	The HRA has considered 'in combination' effects from other drought plans and water company water resource management plans. In accordance with HRA guidance, other plans and projects of relevance were considered when undertaking the in combination effects assessment. These comprise the Severn Trent WRMP, other water company drought plans, EA drought plans and National Policy Statements. Other plans cited in the guidance were assessed as not relevant to the draft drought plan HRA screening (e.g. strategic policies and Local Development Plans) but these were considered in the HRA for the draft Water Resources Management Plan where these are of relevance. The final HRA report has been amended to provide further explanation of the approach to the cumulative assessment and the identification of relevant plans and projects which were reviewed.

Organisation	Comment	Response
	River Leam at Leamington plus River Avon at Stareton plus River Severn Drought Permit/Order at Trimpley. Note the potential for 'in combination effects' on the qualifying species of the Severn Estuary SAC/SPA/Ramsar and support the intention to undertake further investigations by autumn 2013.	This has been noted.
	River Leam at Leamington plus River Avon at Stareton plus River Wye at Wyelands Note the potential for 'in combination effects' on the qualifying species of the Severn Estuary SAC/SPA/Ramsar and support intention to undertake further investigations, notably in the context of the potential impact of the River Wye at Wyelands drought order.	This has been noted.
	River Severn at Trimpley plus River Wye at Wyelands Note the potential for 'in combination effects' on the qualifying species of the Severn Estuary SAC/SPA/Ramsar and support intention to undertake further investigations, notably in the context of the potential impact of the River Wye at Wyelands drought order.	This has been noted.
	River Wye at Wyelands drought order plus Dŵr Cymru potential River Wye drought orders. Agree in principle with this assessment processes' finding that appropriate assessment will be required in respect of potential 'in combination' effects on the Wye SAC. Request clarification as to whether consider potential 'in combination' effects are likely in the context of other stressors and pressures including	Once complete, the outcome of the EAR will include an assessment of 'in combination' effects arising from other pressures, including other abstractors and discharges, including any Dwr Cymru Welsh Water drought permits.

Organisation	Comment	Response
	discharges and as a result of less dilution. In-combination effects assessments: Once the updated EAR and Appropriate Assessment for the Trimpley and Wyelands drought orders are available, recommend that review the drought plan and the associated SEA and HRA including the in-combination assessments.	The outcomes of the EARs and Appropriate Assessments will inform an update of the drought plan and SEA/HRA as appropriate. Severn Trent Water will work with the EA, Natural England and NRW during this process.

5 MONITORING OF THE DROUGHT PLAN

The SEA Directive requires the significant environmental effects of implementing a plan to be monitored. As discussed in Section 2, water companies are already required to assess the environmental effects of drought order/permit measures included in a Drought Plan. The Water Industry Act 1991 and the Drought Plan Direction 2011 require that water companies include in their Drought Plan a statement of how they will monitor the effects of the drought and of measures included in the Drought Plan. These are set out in an Environmental Monitoring Plan (EMP). This requirement is further explained in the DPG, Section 7.2, which states: 'Companies should ensure that adequate arrangements for environmental monitoring are detailed in an environmental monitoring plan within its drought plan.' The DPG explains the function of monitoring before, during and after a drought, which includes the triggering of mitigation measures.

Severn Trent Water's Final DP includes a range of possible measures to allow Severn Trent Water to respond to a particular drought in the most appropriate way. Correspondingly, it is therefore difficult to prescribe precise monitoring for the effects of the DP as a whole, and more appropriate to consider specific monitoring for drought options with significant environmental effects should these options be implemented during an actual drought.

As described in Section 1.5, Environmental Assessment Reports (EARs) were prepared in 2012 for the Derwent Valley Reservoirs (Ladybower Reservoir) drought permit and River Derwent at Ambergate drought permit. Environmental Assessment Reports have been prepared for the Tittesworth Reservoir and River Churnet drought permit and the River Leam at Leamington and the River Avon at Stareton drought permit in 2013. These reports include an Environmental Monitoring Plan (EMP) which specifies the requirements for environmental monitoring in drought condition. The EMP will set out the monitoring required during a drought in advance of, during and post implementation of each drought permit/order option. In this way, the effect of any drought option implementation can be compared to the baseline drought conditions to assess the additional effect that the option has on the environment. It also ensures that assessment is carried out into the extent to which the environment is able to recover once the option ceases to be used. The findings from the monitoring can therefore feed into future reviews and updates to the DP.

The EARs have highlighted some environmental issues where the assessment of impact is uncertain due to data or information gaps. The reports recommend a periodic gap analysis to in order to capture data collected by the EA and third parties and that the Environmental Report is periodically revised with any updated

information. Recommendations are included in the reports for additional baseline environmental monitoring to reduce uncertainty of impact assessment.

Preparation of EARs for the drought permit/order options for the River Severn and River Wye are currently on-going and are expected to be completed during 2014. Once completed, these EARs will include an EMP for the River Severn and River Wye drought permit/order sites. Currently, annual monitoring plans for these drought permit/order locations have been set out in earlier EARs which describe the baseline monitoring to be carried out to support the DP.

Commencement of monitoring in drought conditions in advance of seeking to implement DP options can be linked to the drought trigger control lines in the Severn Trent Water DP, ensuring that monitoring commences sufficiently early to provide a "natural drought" baseline but equally is not implemented too soon such that monitoring effort becomes abortive (with consequent abortive costs) and/or is instigated on a frequent basis. In practice, close dialogue should occur between Severn Trent Water, Environment Agency, Natural Resources Wales and Natural England once drought triggers are approaching to agree whether and where to commence monitoring activities, taking account of prevailing environmental, weather and water resources conditions and outlook/prospects over the coming months.

6 AVAILABILITY OF DOCUMENTS

The adopted final DP and accompanying SEA documentation is available on Severn Trent Water's website at:

www.severntrent.com

The documents are also available for inspection at:

Severn Trent Water Limited
Severn Trent Centre
2 St John's Street
Coventry
CV1 2LZ

If you would like to request copies of the Final DP or associated documentation, please email future.consultation@severntrent.co.uk

APPENDICES

APPENDIX A - POST ADOPTION PROCEDURES

Part 4 of the Environmental Assessment of Plans and Programmes Regulations 2004 requires Severn Trent Water, 'as soon as is reasonably practicable' after the adoption of the DP to:

1. Make a copy of the final DP and Environmental Report available at its principal office for inspection by the public at all reasonable times and free of charge;
2. Notify the public and potentially affected parties of their availability;
3. Inform the statutory consultees and other parties who responded;
4. Issue a statement containing:
    - how environmental considerations have been integrated into the DP;
    - how the environmental report has been taken into account;
    - how consultation responses have been taken into account;
    - the reasons for choosing the DP as adopted;
    - measures to monitor the significant environmental effects of the DP.

Requirements 1 to 3 have been fulfilled by the publication of the DP and SEA documents on Severn Trent Water's website, and informing all consultees of the publication.

The publication of this SEA Post Adoption Statement fulfils Requirement 4.